

Serial No.: 08/790,043
Group Art Unit No.: 1819

In the Claims:

Please cancel claims 6 and 12-24 without prejudice or disclaimer of the subject matter therein and amend the claims as follows:

1. (Amended) An isolated polynucleotide comprising a member selected from the group consisting of:

132 (a) a first polynucleotide having at least a 70% identity to a reference polynucleotide sequence consisting of a sequence encoding a polypeptide comprising amino acids 1 to 256 of SEQ ID NO:2, wherein said identity is determined using an algorithm with default parameters which algorithm is selected from the group consisting of BLASTP, BLASTN or FASTA; and

(b) a polynucleotide which is [complementary to] the complement of the entire length such first polynucleotide of (a) [; and (c) a polynucleotide comprising at least 15 bases of the polynucleotide of (a) or (b)].

2. (Unchanged) The polynucleotide of Claim 1 wherein the polynucleotide is DNA.

3. (Unchanged) The polynucleotide of Claim 1 wherein the polynucleotide is RNA.

4. (Amended) The polynucleotide of Claim 2 comprising [nucleotide] nucleotides 1 to 771 set forth in SEQ ID NO:1.

132 5. (Amended) The polynucleotide of Claim 2 comprising [nucleotide] polynucleotide encoding the amino acid sequence set forth in SEQ ID NO:2.

7. (Amended) An isolated polynucleotide comprising a member selected from the group consisting of:

133 (a) a first polynucleotide having at least a 70% identity to a reference polynucleotide which consisting of a sequence encoding the same mature polypeptide expressed by the FabI gene [cDNA] contained in *Staphylococcus aureus* WCUH 29 contained in NCIMB Deposit No.40771, wherein identity is determined using an algorithm with default parameters which algorithm is selected from the group consisting of BLASTP, BLASTN or FASTA; and

(b) a polynucleotide which is [complementary to] the complement of the entire length such
^{B3} first polynucleotide of (a) ; [and (c) a polynucleotide comprising at least 15 bases of the polynucleotide
of (a) or (b)].

8. (Unchanged) A vector comprising the DNA of Claim 2.

^{B6} 9. (Amended) A cultured host cell comprising the vector of Claim 8.

^{B4} 10. (Amended) A process for producing a polypeptide comprising[:]
the step of culturing
[expressing from] the host cell of Claim 9 under conditions effective to express a Fab I polypeptide
encoded by [said DNA] the first polynucleotide.

11. (Unchanged) A process for producing a cell which expresses a polypeptide comprising
transforming or transfecting the cell with the ~~vector~~ of Claim 8 such that the cell expresses [the] a Fab I
polypeptide encoded by the [cDNA contained in the vector] the first polynucleotide.

Please add new claims provided below. The new claims are directed to the invention in
Group I and introduce no new matter.

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~~25~~ ^{B5} -- (New) An isolated polynucleotide comprising (a) a first polynucleotide having at least
95% identity to a reference polynucleotide consisting of a sequence encoding a polypeptide
comprising the amino acids of SEQ ID NO:2, wherein identity is determined using an algorithm
with default parameters which algorithm is selected from the group consisting of BLASTP,
BLASTN or FASTA, or (b) the complement of the entire length of such first polynucleotide.

-- 26. (New) The isolated polynucleotide of claim 26, wherein having at least 95% identity
means that the first polynucleotide has a number, n_n , which can be zero, of altered, deleted,
inserted or otherwise non-matching nucleotides when compared with the reference polynucleotide
such that:

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$$95\% \leq [1 - (n_n/x_n)] \times 100$$

where x_n is the total number of nucleotides in the reference sequence.

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- 27. (New) The polynucleotide of Claim 25 wherein the polynucleotide is DNA.
 - 28. (New) The polynucleotide of Claim 25 wherein the polynucleotide is RNA.
 - 29. (New) The polynucleotide of Claim 25 comprising the nucleotide sequence set forth in SEQ ID NO:1.
 - 30. (New) The polynucleotide of Claim 25 which encodes a polypeptide comprising amino acids of SEQ ID NO:2.
 - 31. (New) The isolated polynucleotide of claim 25, wherein the first polynucleotide sequence encodes an enoyl-ACP reductase polypeptide.
 - 32. (New) The isolated polynucleotide of claim 25 comprising the first polynucleotide.
 - 33. (New) The isolated polynucleotide of claim 25 comprising the complement of the first polynucleotide.
 - 34. (New) An isolated polynucleotide comprising (a) a first polynucleotide having at least a 95% identity to a reference polynucleotide sequence consisting of a sequence encoding the same mature polypeptide expressed by the Fab I gene contained in NCIMB Deposit No. 40771, wherein identity is determined using an algorithm with default parameters which algorithm is selected from the group consisting of BLASTP, BLASTN or FASTA, or (b) the complement of the entire length of such first polynucleotide
 - 35. (New) A vector comprising the DNA of Claim 34.

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- 36. (New) A cultured host cell comprising the vector of Claim 35.
- 37. (New) A process for producing a polypeptide comprising: expressing from the host cell of Claim 36 a polypeptide encoded by said DNA.
- 38. (New) A process for producing a cell which expresses a polypeptide comprising transforming or transfecting the cell with the vector of Claim 35 such that the cell expresses the polypeptide encoded by the DNA contained in the vector.
- 135 -- 39. (New) An isolated polynucleotide comprising (a) a first polynucleotide having at least a 97% identity to a reference polynucleotide consisting of a sequence encoding a polypeptide comprising amino acids of SEQ ID NO:2, wherein identity is determined using an algorithm with default parameters which algorithm is selected from the group consisting of BLASTP, BLASTN or FASTA, or (b) the complement of the entire length of such first polynucleotide.
- 40. (New) An isolated polynucleotide comprising (a) a first polynucleotide having at least a 97% identity to a reference polynucleotide consisting of a sequence encoding the same mature polypeptide expressed by the Fab I gene contained in NCIMB Deposit No. 40771, wherein identity is determined using an algorithm with default parameters which algorithm is selected from the group consisting of BLASTP, BLASTN or FASTA, or (b) the complement of the entire length of such first polynucleotide.
- 41. (New) A vector comprising the DNA of Claim 40.
- 42. (New) A cultured host cell comprising the vector of Claim 41.
- 43. (New) A process for producing a polypeptide comprising the step of expressing from the host cell of Claim 42 a polypeptide encoded by said DNA.

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- 44. (New) A process for producing a cell which expresses a polypeptide comprising transforming or transfecting the cell with the vector of Claim 41 such that the cell expresses the polypeptide encoded by the DNA contained in the vector.
- 45. (New) A process for producing a Fab I polypeptide or fragment, which fragment retains binding and/or enzymatic activity, comprising culturing a host of claim 42 under conditions sufficient for the production of said polypeptide or fragment.
- 46. (New) An isolated polynucleotide comprising a DNA sequence obtained by screening a *Staphylococcus aureus* strain WCUH29 DNA library containing the complete gene encoding an amino acid sequence set forth in SEQ ID NO:2 under stringent hybridization conditions with a polynucleotide probe having a polynucleotide sequence set forth in SEQ ID NO:1 or a fragment thereof, which fragment is a 17-mer or longer.
- 47. (New) The isolated polynucleotide of claim 1, which hybridizes under stringent conditions to a second reference polynucleotide consisting of the sequence of SEQ ID NO:1 or to the complement of the entire length of such second reference polynucleotide.
- 48. (New) The isolated polynucleotide of claim 47, comprising (a) a first polynucleotide having at least 95% identity to the first reference polynucleotide, or (b) the complement of the entire length of such first polynucleotide. --

REMARKS

With the entry of the above amendments, claims 1-5, 7-11 and 25-48 are pending. Fees required for consideration of this Amendment and Response are believed to be as set forth in the attached Fee Calculation Sheet. Fee payment is as authorized in the Transmittal submitted herewith. These claims are subject to restriction requirement into Groups I to VII.